

## Remarks

Claims 11 and 18-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. For claim 11, "the MSG-enabled interface" and "said MSG-enabled interface" are alleged to have no antecedent basis. Claims 11 and 18-21 have been amended to correct the antecedent basis problem. For claims 18-21, the office action asserts that the scope of "IPv4" MRP and "IPv6" MRP are unclear because MRP protocols listed in paragraph [0040] of the spec include DVMRP, MOSPF, PIM-SM, PIM-DM, CBT, but does not mention "IPv4" MRP and "IPv6 MRP." For the purposes of examination, "IPv4" MRP and "IPv6 MRP have been interpreted to mean any MRP. Claims 18-21 have been amended accordingly.

Claims 5, 7-9, 13 and 14 are rejected under 35 U.S.C. 112, 4<sup>th</sup> paragraph, as being of improper dependent form. The claims have been amended.

Claims 1, 6, 7, 11, 12, 15-18 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Venaas S., "An IPv4 – IPv6 multicast gateway", Internet Engineering Task Force Internet Draft: draft-venaas-mboned-v4v6mcastgw-00.txt, February 2003 (hereinafter Venaas). Applicants respectfully disagree.

For claim 1, page 4 of the office action cites Venaas Section 5.1, paragraph 1 as disclosing the limitation "translating, by the Multicast Signalling Gateway (MSG) on an outgoing router interface, signalling messages of a multicast routing protocol (MRP) into messages of a group membership protocol (GMP)." Paragraph 1 of Section 5.1 of Venaas discloses

An IPv6 host joins the group FFxx:<blah>:a.b.c.d. If the gateway is the DR for the host, it will receive an MLD membership report. If not, it will receive a PIM join since it is the RP for the group. The gateway will then get (\*, G) state for the group. So far this is normal PIM behaviour. The gateway checks whether the address is inside the /96 prefix, and whether the last 32 bits (a.b.c.d) is an IPv4 multicast

address. If it is, it joins a.b.c.d using IGMP, and stays joined as long as it has state for the group.

The above disclosure of Venaas describes the traditional process of a IPv6 PIM-SM router. Venaas states that the router in this example is the RP for a group G and the router includes a multicast gateway to an IPv4 network. Let's consider the case in which the router received a PIM Join. Venaas as quoted above states that the gateway checks the address. If the address is inside the /96 prefix, then the gateway sends an IGMP Join message. Hence, the office action makes the association that Venaas, as in Applicants' Claim 1, is "translating, by the Multicast Signalling Gateway (MSG) on an outgoing router interface, signalling messages of a multicast routing protocol (MRP) into messages of a group membership protocol (GMP)." However, the method of Venaas operates differently. The claim language "on an outgoing router interface" is clearly described in Applicant's specification as well as Figures 3 and 4. In particular, Figure 4's block "INPUT: DETECTING MRP MESSAGE READY FOR SENDING ON INTERFACE ifc\_i" triggers the algorithm at the outgoing router interface, and the block "RENEW GMP SUBSCRIPTION FOR MSG\_srclist(ifc\_i, G) SOURCES OF GROUP G ON INTERFACE ifc\_i" shows that the GMP invocation occurs at the same outgoing router interface. In contrast, the Venaas method is triggered by receiving the PIM Join (or MLD membership report) at the gateway, at which time the gateway checks the address inside the /96 prefix and compares it with its stored state of the group G. Venaas is terse in its description and does not explicitly or implicitly state that this process is occurring at the outgoing router interface. On the contrary, the process of checking the state of the group G sounds like a router process that occurs well in advance of assignment to the outgoing router interface.

In view of the foregoing remarks, Applicants submit that independent claim 1 is novel and non-obvious over Venaas. Applicants further submit that dependent claims 2, 4 and 5-21 are allowable by virtue of their dependency on claim 1. Applicants request the reconsideration and reexamination of this

application and the timely allowance of the pending claims. Please charge any fees associated herewith, including extension of time fees, to 505278.

Respectfully submitted,  
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